# Update on Donor Screening for TSEs

**Melissa A. Greenwald, MD**

**Division of Human Tissues**

**Office of Cellular, Tissue and Gene Therapies**


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# Today's talk will focus on:

- **What are Transmissible Spongiform Encephalopathies (TSEs)?**
- **Background on CJD/vCJD Draft Guidance**
- **Specific recommended deferral criteria**
- **Allow time for discussion and questions**

# What are TSEs?

- **Human Transmissible Spongiform Encephalopathies (TSEs) include Creutzfeldt Jakob Disease (CJD) and variant Creutzfeldt Jakob Disease (vCJD)**
- **CJD has been a known agent, but vCJD has only been identified in the recent past—is a human form of Bovine Spongiform Encephalopathy (BSE), known as “mad cow disease”**

# What are TSEs? (cont.)

- **The TSE agent is a prion–a poorly understood agent; is an abnormal protein that causes a degenerative disease of the central nervous system (CNS) that is not curable and invariably leads to the death of the person with the disease**
- **The agent is very difficult to destroy and would not be inactivated by current tissue processing technology**

# What are TSEs? (cont.)

- **Blood from some animals experimentally infected with TSE agents, including the BSE agent, contains low levels of infectivity**
- **Several TSE agents, including BSE, have been experimentally transmitted by transfusion**
- **Agent for vCJD is ingested, so it is likely that the agent has a blood-borne phase in humans (the specifics of the pathology in humans is poorly understood)**

# What are TSEs? (cont.)

- **There are no published studies showing transmission of the BSE agent via HCT/Ps; however**
- **vCJD agent is present in lymph nodes and tonsils of infected patients**
- **vCJD has been transmitted via blood transfusion in the UK**
- **Transmission of CJD via cornea and dura mater has already been demonstrated in humans**

# What are TSEs? (cont.)

- **Because of studies showing blood infectivity of TSE agents, it is a theoretical risk that HCT/Ps have the potential to transmit TSEs**
- **Because of this theoretical risk, FDA is concerned about the potential for transmission of TSEs via HCT/Ps and therefore considers TSEs a RCDAD and requires donor screening for these agents**

# CJD/vCJD draft guidance

- **Deferral of tissue donors for risk factors for “classic” (sporadic) CJD—already recommended in the 1997 guidance for industry**
- **The draft guidance for CJD/vCJD incorporated those deferrals, and in addition recommends deferrals for risk factors for variant CJD—travel or residence in BSE-affected countries**
- **The draft guidance published June 2002**
- **There was a 6 month comment**

# CJD/vCJD draft guidance

- **Draft guidance was modeled after the guidance for industry for blood donors, issued August 2001**
- **Recommends the same countries, dates, and lengths of travel/residence as does the guidance for blood donors**
- **Permits an exception for the collection and storage of hematopoietic stem cells from donors who live in or travel to a BSE-affected country (for urgent medical**

# CJD/vCJD draft guidance

- **Comments reviewed at CBER**
- **Final recommendations for CJD/vCJD screening will be incorporated into the final Donor Eligibility guidance when published**
- **As of May 25, 2005 Transmissible Spongiform Encephalopathy (CJD and vCJD) is a relevant communicable disease agent or disease (RCDAD) and establishments must screen for CJD/vCJD**

# CJD/vCJD draft guidance

- **Specific deferral criteria in the draft guidance are an indication of FDA's current thinking about how to adequately and appropriately reduce the risk of infectious disease transmission by this agent**
- **Until a final guidance is issued, establishments would not necessarily have to "adopt" the recommended deferral criteria but the regulations do require some screening for TSEs (including CJD and vCJD)**

# CJD/vCJD draft guidance

- **May use alternate screening criteria as long as the screening criteria are at least as strict as those recommended by FDA (i.e., are as effective to adequately and appropriately reduce the risk of infectious disease transmission)**
- **No testing recommendations made—there are no FDA approved tests for humans**

# CJD/vCJD Risks for Donor Screening

- **Persons who have been diagnosed with vCJD or any other form of CJD**
- **Persons who have been diagnosed with dementia or any degenerative or demyelinating disease of the CNS or other neurological disease of unknown etiology [Possible that FDA may make a distinction between dementia and acute delirium (e.g., delirium caused by toxic/metabolic disease or recent head trauma)]**

# Donor Screening (cont.)

- **Persons who are at increased risk for CJD**
  - **Receipt of human dura mater transplant**
  - **Receipt of human pituitary-derived growth hormone**
  - **One or more blood relatives diagnosed with CJD**
- **Persons who spent three months or more cumulatively in the U.K. from the beginning of 1980 through the end of 1996**

# Donor Screening (cont.)

- **Persons who are current or former U.S. military members, civilian military employees, or dependents of a military member or civilian employee who resided at U.S. military bases in Northern Europe for 6 months or more from 1980 through 1990, or elsewhere in Europe for 6 months or more from 1980 through 1996**

# Donor Screening (cont.)

- **Persons who lived cumulatively for 5 years or more in Europe between 1980 and the present**
- **Persons who received any transfusion of blood or blood components in the U.K. between 1980 and the present**
- **NOTE—If the person being interviewed is not familiar with the term CJD, you may take that as a negative response**

# The UK

- For the guidance, the UK includes
  - England
  - Northern Ireland
  - Scotland
  - Wales
  - Isle of Man
  - Channel Islands
  - Gibraltar
  - the Falkland Islands.

# Military Bases

- In Northern Europe includes
  - Germany, UK, Belgium, Netherlands
  - Deferral from 1980-1990
- In Southern Europe includes
  - Greece, Turkey, Spain, Portugal, Italy
  - Deferral from 1980-1996

# Family History of CJD

- Would be ineligible UNLESS:
  - the diagnosis of CJD was subsequently found to be an incorrect diagnosis;
  - the CJD was iatrogenic; or
  - laboratory testing (gene sequencing) shows that the donor does not have a mutation associated with familial CJD

# For further information

**http://www.fda.gov/cber/gdlns/cjdvcjd0602.htm**

**Melissa Greenwald**

**301-827-2002**

**melissa.greenwald@fda.hhs.gov**

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